

CERTIFICADO DE CARACTERIZACIÓN / CHARACTERIZATION CERTIFICATE

INNOVATECIS CIA LTDA

General José María Guerrero N69-170 y Alfonso del Hierro

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Certificado No. (Certificate #): 57372

Fecha de Recepción (Reception Date): 2025-05-26

Fecha de Caracterización (Characterization Date): 2025-05-28

Próxima Fecha de Caracterización (Characterization Due): 2026-05

Fecha de Emisión (Emission Date): 2025-05-30

Cliente (Client): CORPORACION FAVORITA C.A.
COTOGCHOA / AV. GENERAL ENRIQUEZ S/N, QUITO (PICHINCHA)

Información del Instrumento (Instrument Information)					
Equipo (Instrument):	HORNO DE COCCION	Int. de Medición: (Measurement Range)	(60 / 60 / 72 / 75) °C	Ubicación: (Location):	Planta de Embutidos
Marca (Brand):	SCHROTER				
Modelo (Model):	THERMICjet HR-4	División de escala: (Resolution)	0.1 °C	Lugar de Calibración: (Place of Calibration):	In Situ On Site
Serie (Serial #):	111459214				
Código (Code #):					

Datos de Calibración (<i>Calibration Info</i>)	Condiciones Ambientales (<i>Environmental Conditions</i>)	
Procedimiento (<i>Procedure</i>): INN-PC-29	Temp. Inicial (<i>Initial Temp.</i>) 10.6 °C	Hum. Inicial (<i>Initial Hum.</i>): 69.7 %HR
	Temp. Final (<i>Final Temp.</i>): 14.2 °C	Hum. Final (<i>Final Hum.</i>): 61.3 %HR

Trazabilidad (Traceability Info)				
Patrón (Standard)	Marca (Brand)	Cert. #	Última Calibración (Last Cal.)	Período (Period)
Termocupla	-	56690 / 56700 / 56701	2025-05-14	1 año
Termocupla	-	56702 / 56703 / 56704	2025-05-14	1 año
Termocupla	-	56698 / 56699 / 56706	2025-05-14	1 año
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

Resultados (Results)

Ver Resultados en Hoja Adjunta
See results in attached Sheet

El presente Certificado de Calibración posee la trazabilidad en esta magnitud hacia el Patrón Nacional, a través de la realización de la unidad de medida en el NPL, NIST, u otro Laboratorio Nacional reconocido al Sistema Internacional de Medidas. La calibración fue realizada bajo un Sistema de Gestión de Laboratorio conforme a la Norma ISO/IEC 17025:2017. Los resultados y su incertidumbre reportada con un nivel de confianza de k=2, 95% son relacionados a este instrumento y en el tiempo que se realizó las medidas. Este Laboratorio no se responsabiliza de los perjuicios que pueda ocasionar el uso inadecuado del instrumento calibrado. La reproducción parcial es prohibida, la reproducción total deberá hacerse con la autorización escrita aprobada por INNOVATEC Industrial Solutions. *This Certificate of Calibration provides traceability of measurement to the National Standard, through units of measurement realized at the NPL, NIST or other recognized National Standard Laboratories to the International System of Units. The calibration was performed under a Laboratory Management System in accordance with the ISO/IEC 17025:2017 Standard. The results and the reported uncertainty at a confidence level of k=2, 95% are related only to this instrument and at the time of measurement. This Laboratory is not responsible for any damages that may result from improper use of the calibrated instrument. Partial reproduction is forbidden, the total reproduction must have an approved written authorization by INNOVATEC Industrial Solutions.*

Comentarios: (Comments) Los resultados son un promedio de los datos tomados durante la caracterización. Caracterización del Horno Lleno con Salchicha Vienes

Caracterizado por: (Characterized by): Ing. Patricio Llerena

Aprobado por: (Approved by):

Certificado No.: 57372

Equipo (Instrument): HORNO DE COCCION

Fecha de Calibración: 2025-05-28

Marca (Brand): SCHROTER

Nominal (Nominal)	Patrón (Standard)	UBP (UUT)	Error (Error)	Precisión (Accuracy)	Estabilidad (Stability)	Uniformidad (Uniformity)	Incertidumbre (Uncertainty)
60 °C	49.752 °C	54.7 °C	4.923 °C	± 5.0 °C	25.642 °C	16.013 °C	± 18 °C
60 °C	58.315 °C	60.7 °C	2.358 °C	± 5.0 °C	6.235 °C	5.851 °C	± 9.9 °C
72 °C	68.207 °C	70.0 °C	1.763 °C	± 5.0 °C	9.027 °C	7.847 °C	± 14 °C
75 °C	66.957 °C	71.6 °C	4.623 °C	± 5.0 °C	6.873 °C	6.873 °C	± 12 °C

Diagram de Posición de Sensores (Sensor Position Diagram)



Leyenda:

- 1: Sensor #1
- 2: Sensor #2
- 3: Sensor #3
- 4: Sensor #4
- 5: Sensor #5
- 6: Sensor #6
- 7: Sensor #7
- 8: Sensor #8
- 9: Sensor #9

Las imagenes utilizadas solo son un ejemplo de lo puntos de medida empleados y posición de los sensores.

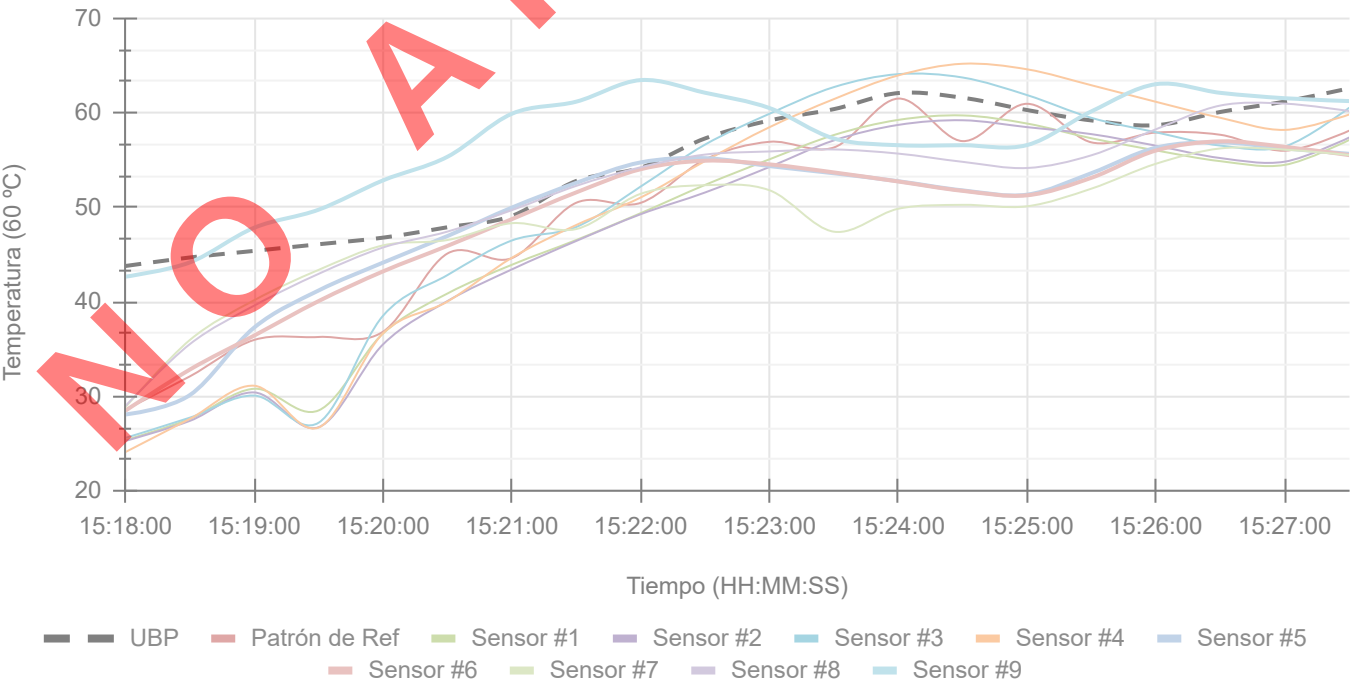
Certificado No.: 57372
Fecha de Calibración: 2025-05-28

Equipo (Instrument): HORNO DE COCCION
Marca (Brand): SCHROTER

Hora (Time)	UBP (UUT)	Patrón de Ref (Ref. Standard)	Sensor #1 (Sensor #1)	Sensor #2 (Sensor #2)	Sensor #3 (Sensor #3)	Sensor #4 (Sensor #4)	Sensor #5 (Sensor #5)	Sensor #6 (Sensor #6)	Sensor #7 (Sensor #7)	Sensor #8 (Sensor #8)	Sensor #9 (Sensor #8)	Error (Error)
15:18:00	43.8 °C	28.608 °C	25.37 °C	25.29 °C	25.61 °C	24.11 °C	28.09 °C	28.49 °C	28.85 °C	28.99 °C	42.67 °C	15.192 °C
15:18:30	44.7 °C	32.118 °C	27.62 °C	27.41 °C	27.75 °C	27.62 °C	30.14 °C	32.84 °C	35.97 °C	35.53 °C	44.18 °C	12.582 °C
15:19:00	45.4 °C	35.980 °C	30.81 °C	30.42 °C	30.09 °C	31.13 °C	37.29 °C	36.44 °C	40.18 °C	39.61 °C	47.85 °C	9.420 °C
15:19:30	46.1 °C	36.290 °C	28.52 °C	26.74 °C	27.22 °C	26.71 °C	41.21 °C	40.09 °C	43.39 °C	42.97 °C	49.76 °C	9.810 °C
15:20:00	46.8 °C	36.848 °C	36.66 °C	35.51 °C	38.54 °C	36.68 °C	44.16 °C	43.23 °C	45.98 °C	45.76 °C	52.86 °C	9.953 °C
15:20:30	47.9 °C	45.123 °C	40.89 °C	40.09 °C	42.84 °C	40.04 °C	46.97 °C	45.93 °C	46.55 °C	47.44 °C	55.36 °C	2.777 °C
15:21:00	49.1 °C	44.635 °C	43.93 °C	43.44 °C	46.50 °C	44.67 °C	49.98 °C	48.76 °C	48.33 °C	49.71 °C	59.91 °C	4.465 °C
15:21:30	52.8 °C	50.493 °C	46.55 °C	46.45 °C	47.93 °C	48.14 °C	52.60 °C	51.59 °C	47.71 °C	52.28 °C	61.19 °C	2.307 °C
15:22:00	54.2 °C	50.483 °C	49.39 °C	49.28 °C	52.21 °C	51.05 °C	54.76 °C	54.04 °C	51.44 °C	54.25 °C	63.47 °C	3.718 °C
15:22:30	57.3 °C	55.082 °C	52.38 °C	51.58 °C	56.65 °C	54.91 °C	55.21 °C	54.94 °C	52.35 °C	55.59 °C	62.13 °C	2.218 °C
15:23:00	59.2 °C	56.943 °C	55.09 °C	54.28 °C	59.91 °C	58.49 °C	54.37 °C	54.55 °C	51.81 °C	55.92 °C	60.51 °C	2.258 °C
15:23:30	60.4 °C	56.344 °C	57.66 °C	57.09 °C	62.73 °C	61.46 °C	53.61 °C	53.70 °C	47.43 °C	56.13 °C	57.29 °C	4.056 °C
15:24:00	62.1 °C	61.515 °C	59.26 °C	58.73 °C	64.10 °C	63.97 °C	52.77 °C	52.74 °C	49.86 °C	55.69 °C	56.58 °C	0.585 °C
15:24:30	61.6 °C	57.012 °C	59.73 °C	59.22 °C	63.74 °C	65.20 °C	51.80 °C	51.75 °C	50.27 °C	54.82 °C	56.58 °C	4.588 °C
15:25:00	60.3 °C	60.963 °C	58.87 °C	58.49 °C	61.88 °C	64.61 °C	51.35 °C	51.28 °C	50.12 °C	54.17 °C	56.60 °C	-0.663 °C
15:25:30	59.2 °C	56.878 °C	57.31 °C	57.75 °C	59.47 °C	62.92 °C	53.63 °C	53.14 °C	51.99 °C	55.52 °C	60.17 °C	2.322 °C
15:26:00	58.7 °C	57.920 °C	56.03 °C	56.53 °C	57.95 °C	61.17 °C	56.32 °C	56.02 °C	54.62 °C	58.27 °C	63.04 °C	0.780 °C
15:26:30	60.1 °C	57.682 °C	54.89 °C	55.22 °C	56.54 °C	59.48 °C	56.88 °C	56.99 °C	56.24 °C	60.78 °C	62.12 °C	2.418 °C
15:27:00	61.2 °C	55.998 °C	54.50 °C	54.84 °C	56.45 °C	58.20 °C	56.24 °C	56.41 °C	56.11 °C	60.98 °C	61.55 °C	5.203 °C
15:27:30	62.6 °C	58.122 °C	57.14 °C	57.40 °C	60.55 °C	59.83 °C	55.67 °C	55.53 °C	55.54 °C	60.19 °C	61.25 °C	4.478 °C

Graficos (Graphs):

Caracterización de Temperatura en 60 °C - Proc. Enrojecer, Tiempo: 10 min



Certificado No.: 57372

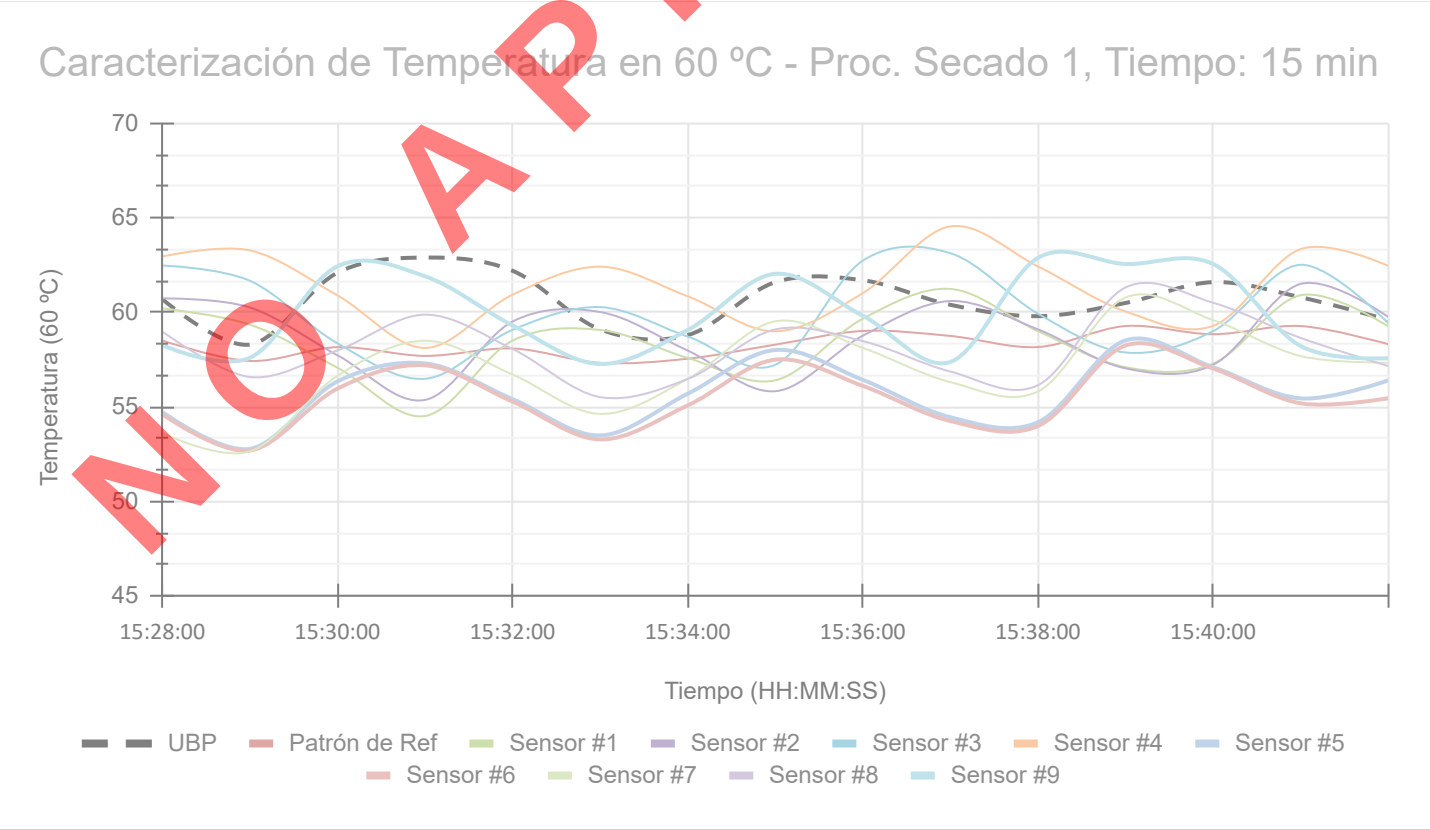
Equipo (Instrument): HORNO DE COCCION

Fecha de Calibración 2025-05-28

Marca (Brand): SCHROTER

Hora (Time)	UBP (UUT)	Patrón de Ref (Ref. Standard)	Sensor #1 (Sensor #1)	Sensor #2 (Sensor #2)	Sensor #3 (Sensor #3)	Sensor #4 (Sensor #4)	Sensor #5 (Sensor #5)	Sensor #6 (Sensor #6)	Sensor #7 (Sensor #7)	Sensor #8 (Sensor #8)	Sensor #9 (Sensor #8)	Error (Error)
15:28:00	60.7 °C	58.510 °C	60.21 °C	60.74 °C	62.48 °C	62.96 °C	54.73 °C	54.61 °C	53.61 °C	58.98 °C	58.27 °C	2.190 °C
15:29:00	58.3 °C	57.429 °C	59.35 °C	60.26 °C	61.67 °C	63.28 °C	52.78 °C	52.69 °C	52.65 °C	56.58 °C	57.60 °C	0.871 °C
15:30:00	62.1 °C	58.162 °C	57.07 °C	57.73 °C	58.36 °C	60.90 °C	56.35 °C	55.97 °C	56.65 °C	57.99 °C	62.44 °C	3.938 °C
15:31:00	62.9 °C	57.699 °C	54.52 °C	55.37 °C	56.49 °C	58.12 °C	57.30 °C	57.20 °C	58.50 °C	59.88 °C	61.91 °C	5.201 °C
15:32:00	62.2 °C	58.091 °C	58.51 °C	59.52 °C	59.08 °C	60.94 °C	55.41 °C	55.28 °C	56.71 °C	58.06 °C	59.31 °C	4.109 °C
15:33:00	59.1 °C	57.331 °C	59.07 °C	60.02 °C	60.28 °C	62.42 °C	53.49 °C	53.28 °C	54.63 °C	55.52 °C	57.27 °C	1.769 °C
15:34:00	58.8 °C	57.550 °C	57.59 °C	57.98 °C	58.72 °C	60.85 °C	55.70 °C	55.08 °C	56.48 °C	56.48 °C	59.07 °C	1.250 °C
15:35:00	61.6 °C	58.294 °C	56.41 °C	55.83 °C	57.23 °C	59.00 °C	58.01 °C	57.50 °C	59.53 °C	59.10 °C	62.04 °C	3.306 °C
15:36:00	61.7 °C	59.018 °C	59.67 °C	58.77 °C	62.74 °C	61.02 °C	56.43 °C	56.11 °C	58.12 °C	58.48 °C	59.82 °C	2.682 °C
15:37:00	60.4 °C	58.753 °C	61.24 °C	60.60 °C	63.13 °C	64.55 °C	54.45 °C	54.25 °C	56.31 °C	56.87 °C	57.38 °C	1.647 °C
15:38:00	59.8 °C	58.168 °C	59.01 °C	59.10 °C	59.93 °C	62.43 °C	54.19 °C	53.99 °C	55.82 °C	56.15 °C	62.89 °C	1.632 °C
15:39:00	60.5 °C	59.279 °C	57.10 °C	57.04 °C	57.88 °C	60.05 °C	58.52 °C	58.25 °C	60.79 °C	61.32 °C	62.56 °C	1.221 °C
15:40:00	61.6 °C	58.846 °C	57.29 °C	57.23 °C	59.01 °C	59.29 °C	57.10 °C	57.03 °C	59.59 °C	60.51 °C	62.56 °C	2.754 °C
15:41:00	60.8 °C	59.277 °C	60.91 °C	61.51 °C	62.52 °C	63.35 °C	55.45 °C	55.19 °C	57.69 °C	58.65 °C	58.22 °C	1.523 °C
15:42:00	59.6 °C	58.317 °C	59.26 °C	59.76 °C	59.43 °C	62.46 °C	56.40 °C	55.46 °C	57.34 °C	57.16 °C	57.58 °C	1.283 °C

Graficos (Graphs):



Certificado No.: 57372

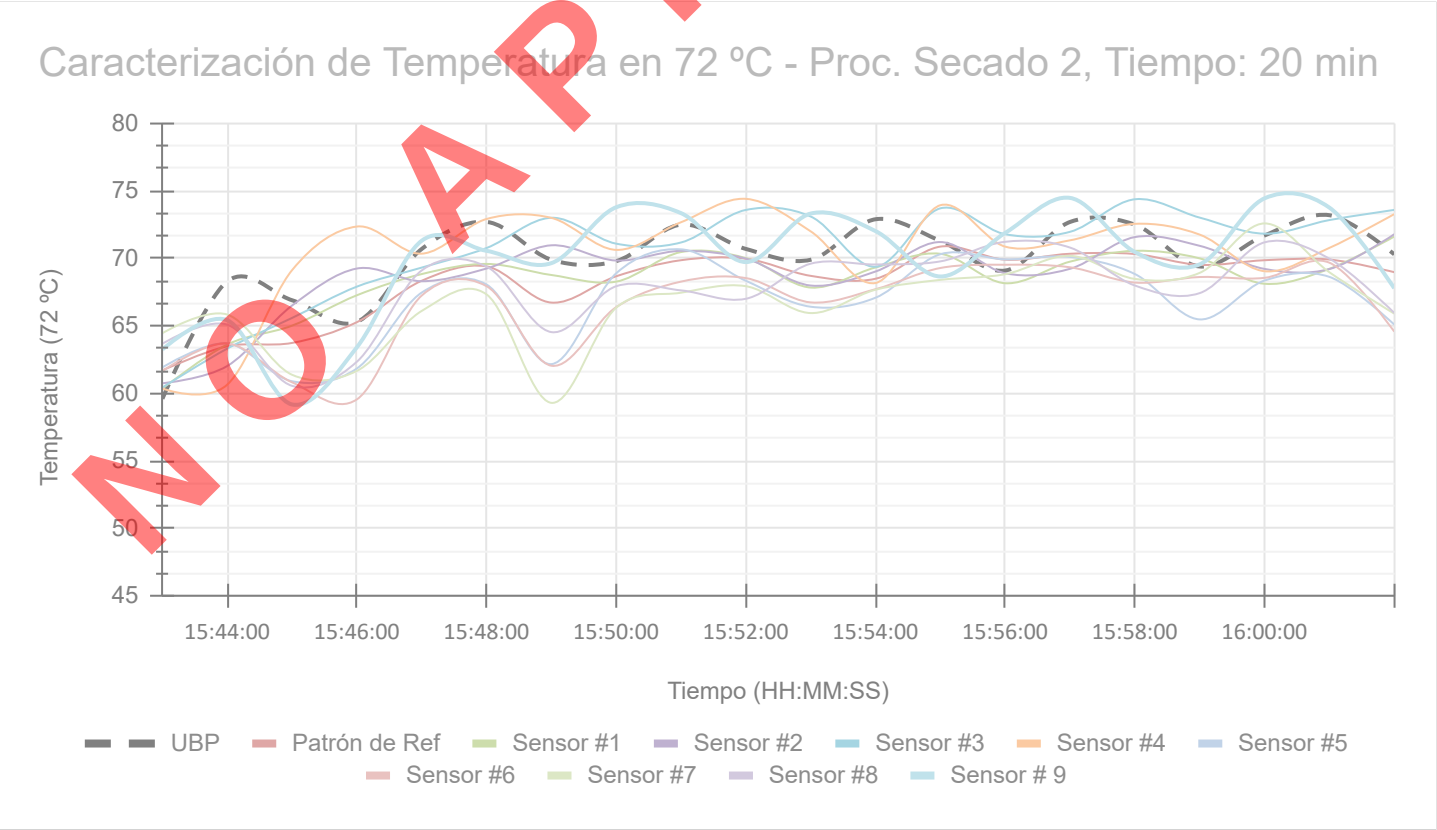
Equipo (Instrument): HORNO DE COCCION

Fecha de Calibración 2025-05-28

Marca (Brand): SCHROTER

Hora (Time)	UBP (UUT)	Patrón de Ref (Ref. Standard)	Sensor #1 (Sensor #1)	Sensor #2 (Sensor #2)	Sensor #3 (Sensor #3)	Sensor #4 (Sensor #4)	Sensor #5 (Sensor #5)	Sensor #6 (Sensor #6)	Sensor #7 (Sensor #7)	Sensor #8 (Sensor #8)	Sensor #9 (Sensor #9)	Error (Error)
15:43:00	59.6 °C	61.705 °C	60.36 °C	60.75 °C	60.44 °C	60.36 °C	61.93 °C	61.66 °C	64.46 °C	63.68 °C	63.25 °C	-2.105 °C
15:44:00	68.3 °C	63.494 °C	63.62 °C	62.03 °C	63.32 °C	60.65 °C	63.70 °C	63.70 °C	65.84 °C	65.09 °C	65.42 °C	4.806 °C
15:45:00	66.9 °C	63.739 °C	65.02 °C	66.51 °C	65.59 °C	69.13 °C	60.90 °C	60.82 °C	61.38 °C	60.56 °C	59.18 °C	3.161 °C
15:46:00	65.3 °C	65.278 °C	67.27 °C	69.25 °C	67.91 °C	72.36 °C	61.85 °C	59.56 °C	61.67 °C	62.35 °C	63.42 °C	0.022 °C
15:47:00	70.7 °C	68.345 °C	68.84 °C	68.31 °C	69.32 °C	70.35 °C	67.47 °C	67.25 °C	66.11 °C	69.11 °C	71.31 °C	2.355 °C
15:48:00	72.7 °C	69.406 °C	69.59 °C	69.25 °C	70.77 °C	72.92 °C	68.06 °C	67.94 °C	67.33 °C	69.39 °C	70.56 °C	3.294 °C
15:49:00	69.9 °C	66.726 °C	68.77 °C	70.97 °C	73.01 °C	73.00 °C	62.17 °C	62.05 °C	59.30 °C	64.54 °C	69.65 °C	3.174 °C
15:50:00	69.8 °C	68.678 °C	68.28 °C	69.84 °C	71.09 °C	70.63 °C	68.90 °C	66.39 °C	66.35 °C	67.94 °C	73.79 °C	1.122 °C
15:51:00	72.5 °C	69.866 °C	70.47 °C	70.56 °C	71.18 °C	72.68 °C	70.67 °C	68.28 °C	67.46 °C	67.63 °C	73.35 °C	2.634 °C
15:52:00	70.7 °C	69.979 °C	70.02 °C	69.98 °C	73.59 °C	74.41 °C	68.34 °C	68.54 °C	67.94 °C	67.01 °C	69.73 °C	0.721 °C
15:53:00	69.9 °C	68.706 °C	67.84 °C	67.99 °C	73.10 °C	72.00 °C	66.42 °C	66.74 °C	65.95 °C	69.61 °C	73.32 °C	1.194 °C
15:54:00	72.9 °C	68.495 °C	69.33 °C	69.03 °C	69.38 °C	68.18 °C	67.09 °C	67.72 °C	67.68 °C	69.55 °C	72.02 °C	4.405 °C
15:55:00	71.3 °C	70.874 °C	70.34 °C	71.21 °C	73.71 °C	73.94 °C	70.31 °C	69.29 °C	68.41 °C	69.78 °C	68.66 °C	0.426 °C
15:56:00	69.1 °C	69.905 °C	68.16 °C	68.90 °C	71.79 °C	70.87 °C	69.93 °C	69.53 °C	68.83 °C	71.23 °C	71.89 °C	-0.805 °C
15:57:00	72.7 °C	70.343 °C	69.76 °C	69.23 °C	71.97 °C	71.34 °C	70.11 °C	69.34 °C	70.19 °C	70.80 °C	74.48 °C	2.358 °C
15:58:00	72.5 °C	70.325 °C	70.56 °C	71.58 °C	74.38 °C	72.56 °C	68.84 °C	68.21 °C	68.48 °C	67.99 °C	70.47 °C	2.175 °C
15:59:00	69.4 °C	69.521 °C	70.00 °C	70.93 °C	73.02 °C	71.76 °C	65.48 °C	68.62 °C	68.93 °C	67.43 °C	69.56 °C	-0.121 °C
16:00:00	71.7 °C	69.865 °C	68.12 °C	69.22 °C	71.83 °C	69.05 °C	68.36 °C	68.56 °C	72.59 °C	71.19 °C	74.45 °C	1.835 °C
16:01:00	73.2 °C	69.915 °C	69.23 °C	69.21 °C	72.84 °C	70.78 °C	68.63 °C	69.68 °C	68.97 °C	69.98 °C	73.76 °C	3.285 °C
16:02:00	70.3 °C	68.979 °C	71.62 °C	71.79 °C	73.59 °C	73.28 °C	65.10 °C	64.58 °C	65.91 °C	65.96 °C	67.79 °C	1.321 °C

Graficos (Graphs):



Certificado No.: 57372

Equipo (Instrument): HORNO DE COCCION

Fecha de Calibración: 2025-05-28

Marca (Brand): SCHROTER

Hora (Time)	UBP (UUT)	Patrón de Ref (Ref. Standard)	Sensor #1 (Sensor #1)	Sensor #2 (Sensor #2)	Sensor #3 (Sensor #3)	Sensor #4 (Sensor #4)	Sensor #5 (Sensor #5)	Sensor #6 (Sensor #6)	Sensor #7 (Sensor #7)	Sensor #8 (Sensor #8)	Sensor #9 (Sensor #9)	Error (Error)
16:03:00	71.4 °C	68.519 °C	68.12 °C	67.42 °C	68.86 °C	68.94 °C	68.66 °C	68.40 °C	68.31 °C	69.44 °C	70.94 °C	2.881 °C
16:03:30	72.4 °C	66.334 °C	66.29 °C	65.40 °C	66.59 °C	66.48 °C	67.27 °C	65.58 °C	66.86 °C	66.20 °C	67.25 °C	6.066 °C
16:04:00	73.2 °C	67.396 °C	69.04 °C	67.91 °C	68.11 °C	69.26 °C	68.20 °C	65.68 °C	65.27 °C	65.70 °C	67.66 °C	5.804 °C
16:04:30	72.4 °C	70.644 °C	71.59 °C	70.40 °C	71.10 °C	72.82 °C	71.16 °C	69.17 °C	69.94 °C	68.97 °C	68.23 °C	1.756 °C
16:05:00	71.9 °C	70.988 °C	71.56 °C	70.57 °C	71.19 °C	73.83 °C	71.59 °C	70.71 °C	69.15 °C	69.30 °C	71.12 °C	0.913 °C
16:05:30	71.4 °C	67.641 °C	68.40 °C	68.26 °C	66.30 °C	67.39 °C	66.62 °C	66.21 °C	68.71 °C	69.24 °C	68.35 °C	3.759 °C
16:06:00	71.2 °C	65.038 °C	65.45 °C	65.76 °C	65.29 °C	64.29 °C	64.71 °C	64.86 °C	65.42 °C	64.52 °C	64.98 °C	6.163 °C
16:06:30	70.9 °C	62.845 °C	62.76 °C	63.04 °C	61.98 °C	60.22 °C	62.20 °C	63.16 °C	64.09 °C	65.31 °C	65.48 °C	8.055 °C
16:07:00	70.6 °C	65.305 °C	65.22 °C	65.91 °C	64.84 °C	63.25 °C	65.45 °C	65.21 °C	65.99 °C	66.57 °C	70.51 °C	5.295 °C
16:07:30	70.4 °C	64.859 °C	65.31 °C	64.81 °C	65.49 °C	62.23 °C	65.26 °C	65.17 °C	64.32 °C	66.28 °C	70.81 °C	5.541 °C

Graficos (Graphs):

